



the WATER TAP

WASHINGTON'S DRINKING WATER NEWSLETTER

Guest Commentary:

Training for Small Systems Really Works

By **Larry J. Hargrove**

Operator and Board President
Bay City Water System

I retired from the US Coast Guard in 1995 and came to live in Aberdeen with my wife, son, and daughter. I work as a food manager at Stafford Creek Correction Center.

I inherited the job as operator for our community water system, which serves about 34 families. I am also the president of our operation here. It is kind of like being a mayor. You get to solve and trouble shoot problems.

The person I took the job from died before he could tell me about all the ins and outs, so if it had not been for training classes I would have been lost.

I have been going to the small systems classes that are offered by Evergreen Rural Water and WETRC ever since 1995. I find the classes very rewarding. The instructors are very honest and knowledgeable. If they run across a topic they are not familiar with, they will tell you they do not know about that, but they will see if someone else has the answer and get back to you. The way I see it, the students are not the only ones learning something new here—the instructors are also open to learning new things.

I have attended classes on how to rebuild pumps and different pump systems, how to take proper water samples, wellhead protection, and sanitary surveys. These

classes were free for the most part and packed with a lot of knowledge.

I took the water sampling class in October. It reassured me that I was doing the sampling the right way. Shortly after that we had a main water pipe ruptured. When I got home, one of the neighbors was repairing it. I told them that I would have to take a sample before anyone could drink the water. They told me it was just fine and there was nothing wrong with the water. I took the sample anyway, and it came back positive for coliform, which is found in soil. That told me that some dirt probably got in the pipe and went through our system. I put out notices from the start all the way to the end until I got a negative reading back from the lab. Then I sent out a notice that everything was okay and thanked everyone for their patience.

I am glad I listened to those lectures about how important it is to beware of what might be in your water system. If I had not followed those procedures that I learned in class and not posted the notices and someone got sick, they could have sued our community water system for not informing them.

The lesson I learned here is to follow what I learned in class regardless of what others may say. It is better to know for sure than to be sorry later and wish you had done something at the beginning.

I find all those classes very interesting. I have found a network of friends that I can call up and get answers and help.



Volume 18, #5 - Dec. 2003

Inside This Issue

Directors Column	2
DBPR Rule	3
Surface Water Systems Cold Weather Reminder	4
Enhanced Surface Water Treatment Rule	5
Website Suggestions	5
Sampling Tips	6
Customer Survey	7
BAT Lists	7
Distance Education	8
Plumbing Code	9
Cross-Connection Control Data	10
WSARP	11
Online Change of Address	12
Certified Operator Exam Schedule	12
Sampling Basics	13
Public Hearing/Three Final Proposed Rules	14
Water Taste Test	15
Municipal Water Law	15
Publications	16
Drinking Water Seminars	17
Training Calendar	18
Free TNC Training	20

THE DIRECTOR'S COLUMN

BY RICH HOEY - ACTING DIRECTOR



Floods highlight importance of emergency planning

Living in the Pacific Northwest, I've come to expect natural disasters. Whether it's floods, droughts, earthquakes, wind storms, or volcanic eruptions, we certainly have our share of

challenges thrown at us by the natural world.

All natural disasters can pose significant risks to public water systems and the health of the people who depend on them. The risks are extremely variable, depending on the type of event and the specific vulnerabilities of each system. Bad things can happen even to the very best water systems.



On October 21, the Skagit River crested two feet below a dike near the city of Anacortes water treatment plant.

Emergencies can strike without warning. Knowing in advance how to respond can save lives, most importantly, but also can protect property, health, money, and even careers. It's crucial that each water system develop its own emergency response plan so staff know how to respond to any situation.

Record rainfalls and floods on October 20-21 were the latest such challenge in Washington, and Office of Drinking Water staff worked with utilities, local health, and other state agencies to help protect the public. One of our roles was to assist at the state Emergency Operations Center for the duration of the flooding.

A principal danger during floods is the potential for floodwater to enter the distribution system and sicken people in the community. A number of water utilities had

to take extraordinary action recently to protect their customers from such problems.

The city of Anacortes takes its water from the Skagit River and processes it through a conventional treatment plant. During the worst of the flooding, raw water turbidities went from a normal of 10-100 NTU (a measure of the clarity of water) to over 5,000 NTU. Managers and operators at the Anacortes water treatment plant did excellent work dealing with these tremendous raw water turbidity spikes and ensuring that the water leaving the plant met public health standards.

According to Willy LaRue, the manager of the Anacortes plant, rumor control became one of their most important activities. "There was a lot of misinformation out there," he said, "but we kept on top of it by issuing news releases quickly. It really helped that we had worked out our procedures in advance and had our public works director on site functioning as the public information officer."

LaRue had one other bit of advice for operators facing an emergency: "Once you think you've seen it all, think again. Just the week before, we were patting ourselves on the back for dealing with a new high of 675 NTU, never imagining that we were about to get hit with over 5,000."



"Thought you might like to see what 5475 NTU water looks like. Sample on the right is raw water, one on the left is the finished, 0.05 NTU."
~ Willy LaRue, Plant Manager, Anacortes water treatment plant

The Office of Drinking Water staff worked with the communities of Silvana and Stanwood in Skagit County to issue boil water advisories to consumers as drinking water supplies became threatened with contamination. Utilities in both communities are to be commended for their quick public notification and follow-up activities to lift boil water advisories when samples confirmed that the

water was safe to drink. (Advisories were on for about half a day for Stanwood and four days for Silvana.)

Heavy rainfall may also have affected drinking water in other areas of western Washington. The cities of Shelton and Snoqualmie issued boil water advisories in late October following the detection of coliform bacteria in their distribution systems. Both communities worked effectively with our staff to issue news releases and deliver public notices to customers within a few hours. The city of Snoqualmie's boil water advisory was lifted following shut down of a contaminated spring source and activation of a chlorinated groundwater source throughout the distribution system.

Due to ongoing total coliform bacteria violations over past several months, we have informed the city of Shelton that permanent, continuous disinfection will be required.

If your system needs to develop or update its emergency response plan, take a look at our *Emergency Response Planning Guide for Public Drinking Water Systems* (publication #331-211). It's designed in an easy to use, fill in the blank format, and is on the web at <http://www4.doh.wa.gov/dw/publications/>. You can download it from there or ask us to send you a hard copy with the planning templates on a CD.

Also on our website is a wealth of information to help you during health advisory situations. You can find this information at <http://www.doh.wa.gov/ehp/dw/Coliform/coliform.htm>

Because responding to emergencies is our highest priority, the Office of Drinking Water continually looks for ways to improve our response efforts. We expect the same of water utilities. There is a lot to be learned by debriefing emergency response efforts after an emergency is over. Take the opportunity to learn from others and enhance your emergency response efforts.

Stage 1 Disinfectants and Disinfection By-products Rule (DBPR)

Some systems will be doing more monitoring in 2004

Community or nontransient noncommunity (NTNC) water systems that use continuous chlorination or ozonation during any part of the treatment process must meet some new requirements beginning in January, 2004.

Washington's DBPR rule, which took effect April 27, 2003, requires these systems to monitor disinfectant residuals and disinfection by-products within their distribution systems. Some surface water systems will also need to monitor for disinfection by-product precursors in their sources.

All monitoring must be done according to a system-specific monitoring plan developed by the end of January, 2004. Monitoring requirements are linked to size and type of system, source and treatment types, and the number of treatment plants.

Technical assistance

Two agencies are available to provide technical assistance in preparing monitoring plans:

Rural Community Assistance Corporation
(systems serving less than 3,300 populations)
509-422-2016 or <http://www.rcac.org/>

Evergreen Rural Water of Washington
(all size systems)
360-462-9287 or <http://www.erwow.org/>

More information:

Regional DBPR specialists

Eastern Regional Office
Mike Wilson, 509-456-3186

Northwest Regional Office
Jolyn Leslie, 253-395-6762

Southwest Regional Office
Jerrod Davis, 360-586-2510

EPA website:
<http://www.epa.gov/safewater/mdbp/dbpfr.html>



Reminder to Surface Water Systems: *Adjust your Operations for Cold Weather*

If you operate a surface water source in wintertime, please read on.

With the coming of colder weather, you will need to make adjustments to your treatment processes. Some of these are covered below.

Disinfection

Chlorine is less effective under cold-water conditions. For example, consider a filtered system located in Western Washington that is required to provide 1 log inactivation of *Giardia lamblia* cysts through the disinfection process. As you can see from the following table, this example system must double its summertime residual to achieve the same level of *Giardia* inactivation in winter.

	pH	temperature (°C)	contact time (minutes)	required chlorine residual (mg/l)
Summer conditions	7.8	16.0	54	0.6
Winter conditions	7.8	8.0	54	1.2

A check of last year's records (pH, temperature, and contact time) will help you determine the correct target for this winter's operations for your system. Daily contact time monitoring will make sure you stay on track.

Coagulation

Winter weather may bring source water quality changes such as turbidity spikes or increases in iron or manganese levels. In addition, the performance of your coagulation chemical may be temperature-dependent. Check historical records for your plant or try some jar testing to determine what adjustments may be necessary to keep your plant operating in top condition under winter conditions.

Systems which use a streaming current detector (SCD) may need to relocate their SCD sampling point farther downstream of chemical injection during cold water periods. Streaming current optimum set-points will need to be re-evaluated.

Filter aid polymers (such as starch or polyacrylamide products) may dramatically improve filter performance during cold weather operation—perhaps more than at any other time of year.

Backwash expansion

For systems that operate rapid sand filtration plants, proper cleaning of the filter bed during the backwash cycle depends on maintaining proper bed expansion. This expansion should remain constant year-round. In general, a higher flow rate is needed to achieve the same bed expansion during warm water periods than in cold water periods. This is because warm water has less lifting power than cold water due to the difference in viscosity. If you are located in an area with wide temperature variations and you do not make an adjustment for temperature, your filters may not be sufficiently cleaned in summer, or you may lose filter media due to carryover in winter.

For more information on this topic, please contact your regional engineer. Other sources of information include:

- AWWA's Opflow Magazine. The November cover article is on filter bed expansion.
- ODW-sponsored training sessions: "Filtration Processes" will be held in early December. Contact Vicki Steiner at 406-457-5234 for information on these free workshops.

Long Term 1 Enhanced Surface Water Treatment Rule

Cryptosporidium-focused surface water treatment requirements must be met by January 2005

In January 2002, the Environmental Protection Agency (EPA) finalized the Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR), which applies to water systems that use surface water sources or ground water under the direct influence of surface water (GWI) sources and serve less than 10,000 people.

The public health goal of this rule is to reduce the risk of waterborne disease outbreaks from pathogens in surface water, especially *Cryptosporidium*, a microbial contaminant responsible for the largest waterborne disease outbreaks in the United States in the past 20 years, including one in Milwaukee that affected more than 400,000 people.

The LT1ESWTR affects about 150 public water systems in Washington. The requirements of the rule vary depending on the type of water treatment:

Conventional and direct filtration

- Finished water turbidity standard of 0.3 NTU in 95% of the combined filter effluent measurements taken each month. (The previous standard was 0.5 NTU.)
- A maximum finished water turbidity standard of 1 NTU. (The previous standard was 5 NTU.)
- Individual filter effluent must be monitored at least every 15 minutes and actions taken to diagnose problems with a filter if turbidity thresholds are exceeded.
- The DOH Treatment Optimization Program (TOP), described in the September 2003 issue of *Water Tap*, is

part of an effort to help water systems provide lower finished water turbidity and improved public health protection.

Slow sand and diatomaceous earth (DE) filtration

- Continue to meet the existing turbidity limits.

Bag, cartridge, and membrane filtration

- State-set turbidity limits must not exceed 1 NTU (in at least 95% of measurements) or 5 NTU (maximum).
- Demonstrate at least 99% (2-log) removal of *Cryptosporidium* oocysts.
- The bag and cartridge filters currently used in the state have not been demonstrated to consistently provide 2-log removal of *Cryptosporidium*. EPA and other organizations have started research to determine which bag and cartridge filters can meet the requirements of the LT1ESWTR. DOH will summarize the results of the testing once they become available.

There is also a requirement for community and non-transient noncommunity systems treating surface water sources to develop a disinfection profile. DOH completed this requirement for water systems in 2002. Each system serving less than 10,000 people should have received a letter from DOH with a copy of the profile enclosed.

The State Board of Health has scheduled a public hearing on January 14th, 2004 to solicit formal comments on the proposed rules. The final rule adoption is scheduled for January 2004, with an effective date in March.

More information

Bill Thurston, Rule Development Lead, 360-236-3126
Theresa Phillips, Rules Coordinator, 360-236-3147



Your suggestions for our Web site will bring changes

The Office of Drinking Water will be making changes to its Web site based on information received from our recent on-line questionnaire, "Improving the Office of Drinking Water Web Site."

Three of the most-requested enhancements were:

- An A to Z topic list.
- Forms and templates available on-line for downloading.
- More water system specific data.

We will make improvements beginning with the most requested enhancements and then work to add others as well. Thanks to all of you who provided valuable feedback.

Sampling Reminders and Tips for 2003

Many samples are due by December 31

Lead and Copper

Water systems with a lead and copper monitoring requirement that ends in 2003 must collect and submit their samples to a qualified laboratory by December 31. The Office of Drinking Water sent postcards in April and November notifying applicable water systems of the number of samples required and the time line for taking them.

Lead and copper sampling is required only of Community (COMM) and Non-transient Non-community water systems (NTNC). The number of samples required is based on the total population served by the system.

Samples should be “first draw” samples (meaning that the sample is collected as soon as you open the tap, rather than letting the water run), taken from a cold water faucet inside individual homes after the water has been standing in the pipes for a minimum of 6 hours (but no longer than 12 hours).

With the holiday season here, it may be a good idea to check with the lab for hours and days they will be open.

If you are new to lead and copper monitoring and would like more information on how to sample, you can request an initial monitoring guidance packet by calling 1-800-521-0323.

Nitrate

Annual and fourth quarter nitrate samples need to be collected by December 31. All Group A water systems are required to take a nitrate sample for each source at least once per year. Transient Non-community (TNC) systems that may not operate year-round are still required to collect a nitrate sample. Those systems with sources that are required to take quarterly samples must collect their fourth quarter sample between October 1 and December 31.

Some things to think about when collecting your nitrate sample:

- Sampling requirements are per source, and each active permanent and seasonal source must be sampled (emergency sources do not have to be sampled). If you have had source or system changes in the last

year, this may also be a good time to contact DOH and update your Water Facilities Inventory (WFI).

- If you have a well field (as shown on your WFI), the nitrate requirement is for the well field, not the individual wells of the well field. Samples should be taken at a point after the sources come together, but prior to the first connection.

- Make sure you include as much information as possible when submitting your samples to the laboratory. Essential information includes: water system name and ID number (PWS ID#), collect date, source number or multiple source numbers (when a blended sample is taken), sample type (after or before treatment), and sample purpose (routine/compliance, confirmation, investigative, etc.). Also, make sure the laboratory or your system submits a copy of the sample report to DOH in a timely fashion.



- Sample bottles can usually be obtained from the laboratory along with instructions on preservation and transport of the sample. Check with the lab for hours and days they will be open.
- Try to sample early in the week if possible. This allows you time to react if the sample exceeds the maximum contaminant level (10.0 mg/L).

If you have any questions regarding your nitrate sampling requirements or need information on laboratories qualified for nitrate analysis, feel free to contact Derrick Dennis at 1-800-521-0323.

Radionuclide (Gross Alpha)

During the first week of November, the Department of Health sent postcards to about 750 Group A Community water systems reminding them to collect a sample for gross alpha radionuclide analysis by the end of December 2003.

To take advantage of a unique grandfathering provision of the radionuclide rule, systems should collect a gross alpha sample between June 1, 2000 and December 31, 2003. Grandfathering could reduce the amount of radionuclide sampling required in the future.

If you already collected a gross alpha sample since June 1, 2000 for sources listed on the reminder postcard, please disregard the notice.

Only two labs in Washington are certified to perform the gross alpha radionuclide analysis:

Washington State Department of Health

Public Health Laboratory

1610 NE 150th Street
Shoreline, WA 98155-9701

Severn-Trent Laboratories

2800 George Washington Way
Richland, WA 99352
(509) 375-3131

If you have questions, please contact your regional source monitoring water quality staff person:

Eastern Region – Anita Waterman 509-456-2475

Northwest Region – Steve Hulsman 253-395-6777

Southwest Region – Belle Fuchs or
Donna Freier 360-586-5179

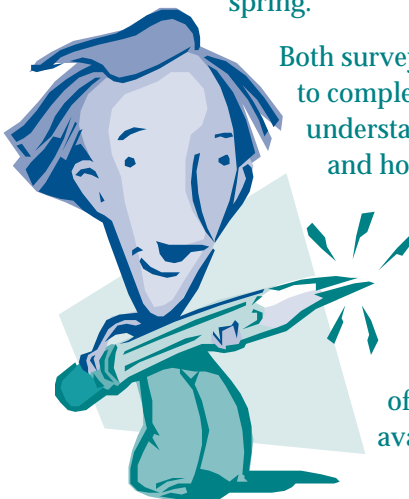
How are we doing?

Customer satisfaction surveys are coming to water system owners and operators

The Office of Drinking Water is dedicated to providing top-rate service to all our customers. To help ensure that this happens and to determine if there are areas that need improvement, we decided to begin by conducting two customer satisfaction surveys focusing on our Operator Certification Program. The first will be directed to public water system owners and the second to certified water works operators.

The owners survey will be mailed the last week of December. Owners may complete the survey online or by completing and returning the hard copy by January 23, 2004.

The certified water works operators survey will be mailed in the spring.



Both surveys should take less than 5 minutes to complete. Your responses will help us understand how you rate our services now, and how we might better serve you in the future.

The Office of Drinking Water thanks you in advance for taking time to provide your feedback. We will let you know the outcome of the surveys once the results are available.

Backflow Assembly Tester (BAT) lists to be published

The Office of Drinking Water has contracted with the Washington Environmental Training Center (WETRC) to develop two different BAT listings that will be available on the web at www.WETRC.org after January 1, 2004:

Certification list

Will contain all certified BAT names and certification numbers. The data will be searchable by name or number.

Public listing by county

Will list certified testers who authorize publication of their name, certification number, contact phone number, and one county. All certified BATs received an authorization form with their 2004 renewal notice. Only those who provide WETRC with a signed authorization form will be added to the public listing.

For more information about the new listings, or to request a BAT Public Listing Authorization Form, contact WETRC at 800-562-0858 or 253-288-3369 extension 3.

New Distance Education Guidelines Adopted for Water Works Operator Certification

Effective January 1, 2004 some courses approved in the past may no longer be accepted



Distance education is a rapidly growing industry, with training being developed in various formats that range from traditional correspondence courses to use of cutting-edge computer technology.

In a climate of budget restrictions, new certification requirements for very small water systems, and a drive for greater convenience in scheduling training, we can expect an increased demand for relevant distance education.

Most state certification programs are being called on to evaluate more of these types of training programs. Unfortunately, the usual questions, tools, and methods we use to evaluate instructor-led classroom training curriculums do not provide the information we need to effectively evaluate training provided through distance education.



A national model emerges

Almost three years ago, the Association of Boards of Certification (ABC), in cooperation with the American Water Works Association and the Water Environment Federation, began an extensive project to research industry standards for development and accreditation of distance education. This collaborative effort, combined with input from state certification programs, led to the development of a national guidance model that considers the needs and perspectives of distance education

developers, sponsors, certifying authorities, and evaluators.

The ABC project was discussed at the June 2002 Washington Water Works Operator Certification Advisory Committee meeting. Concerns were raised about the evaluation, accreditation, and exam security of distance education courses currently being accepted toward the education and professional growth requirement of water works operators in Washington. The committee encouraged the Water Works Operator Certification Program to investigate these issues and provide recommendations.



A new approach for Washington State

In April 2003 the Department of Health (DOH) Office of Drinking Water contracted with the Washington Environmental Training Center (WETRC) to incorporate the department's existing water works operator professional growth criteria into new guidance, forms, and processes for evaluating and accrediting distance education. As part of this project, WETRC contacted 70 water works operator certification programs to request recommendations of distance education training sponsors with a curriculum relevant to the training needs of certified water works operators. An information packet was then sent to the 27 potential distance education sponsors identified.

The Washington Water Works Operator Certification Advisory Committee recommended that DOH approve the guidelines for the evaluation and accreditation of distance education used by water works operators to meet the education requirement for certification examination or the professional growth requirement for certification renewal. After further review, DOH approved "Guidance for the Evaluation and Accreditation of Distance Education" in

October 2003 and directed WETRC to begin applying the new criteria effective January 1, 2004.



All distance education is being re-evaluated

All distance education courses, including previously accepted distance education courses such as the California State University correspondence courses, will now be evaluated using the new guidelines.

DOH has directed WETRC to continue accepting all distance education that was previously approved or under review through December 31, 2003. However, effective January 1, 2004 some courses that have been approved in the past may no longer be accepted, based on the new guidelines.

If you are currently enrolled in a distance education course approved in Washington state, you must complete it prior to December 31, 2003 to ensure that it will be accepted.



Contact WETRC regarding any future distance education

You should contact Peggy Barton at WETRC at 253-288-3369 for approval before enrolling in any type of distance education course, including correspondence course, online, video, or CD-ROM training.

The procedures, requirements and forms for operators to submit distance education completion documentation will be available from WETRC after January 1, 2004. A list of approved courses will also be available.

Certified water works operators have already received information about possible changes based on the new guidelines with their 2004 renewal notices.

Be sure to watch future issues of Water Tap for more information about approved distance education opportunities for water works operators in Washington.

DOH works with State Building Code Council on 2003 Uniform Plumbing Code

The State Building Code Council (SBCC) is the agency responsible for Uniform Plumbing Code (UPC) adoption in Washington. The SBCC is currently considering adoption of the 2003 UPC with amendments specific to Washington, including some related to cross-connection control (CCC).

In October 2003, the Department of Health (DOH) Office of Drinking Water provided comments to the SBCC as part of the code adoption process. The primary purpose of the inter-agency coordination was to improve consistency between the UPC and WAC 246-290-490. This coordination was a continuation of the working relationship established between DOH and the SBCC in 1996.

The SBCC proposed retaining in the 2003 UPC all previously adopted CCC-related amendments to the 2000 UPC. The SBCC also proposed one new CCC amendment to the 2003 UPC. DOH supported adoption of all of the proposed CCC related amendments.

The SBCC held two public hearings on the 2003 UPC in Spokane and Renton in October, accepting both written comments and verbal testimony. The SBCC held a work session November 21, 2003 and approved all the CCC-related amendments as proposed. The 2003 UPC requirements will become effective July 1, 2004.

For further information on the SBCC's UPC adoption process, contact Krista Braaksma at kristab@cted.wa.gov or 360-725-2964.





DOH Collects Second Round of Cross-Connection Control Data

For the second year, the Department of Health (DOH) Office of Drinking Water has collected cross-connection control (CCC) program data from large utilities. We were particularly interested in obtaining data on implementation activities and backflow protection for high hazard premises.

In conjunction with the 2002 data gathering effort, we improved the web-based process that enables utilities to submit CCC data via the Internet.

Data for 2002 was collected from the largest community public water systems (with 1000 or more service connections) in Washington. In March 2003, 198 systems received the annual CCC forms for the 2002-reporting year. The forms were due in May 2003.

As of November 14, 193 systems had submitted 2002 CCC report forms to DOH—an improvement from last year's 164. Use of the web-based process doubled from last year, with 135 systems submitting 2002 data using the Internet. Improvements in most public health categories were noted for 2002.

Findings from the 2002 data

Results to date indicate that:

- 80% of systems in Washington have written CCC programs and implementation activities.
- 91% have a DOH-certified cross connection control specialist to develop and implement their CCC programs.
- 61% of over 9600 high hazard premises met the backflow protection requirements.
- 76% of sewage-related facilities had the required backflow protection.

- 87% of RPBA's and 81% of DCVAs were tested during the reporting year.

Follow-up activities

DOH has begun a phased follow-up with systems serving unprotected high health cross-connection hazards, starting with the sewage-related facilities. In early 2004, these systems will be asked to submit action plans to DOH to ensure that the proper backflow protection is provided in a timely manner to protect the water system from contamination.

DOH is also working with the five systems that have failed to submit reports for 2002 to bring them into compliance with the reporting requirements of WAC 246-290-490.

Planning for collection of 2003 data

DOH is also working on plans for collection of 2003 data. This month, we plan to send report form packets to community systems with 1000 or more connections. The CCC report forms will be due the end of February 2004.

DOH plans to conduct training sessions in January 2004 in Tacoma and Spokane. Sessions are also being considered for Yakima and Longview.

The data collected during 2003 will be used to update information on the status of CCC program development and implementation activities, identify public health trends, assess public health improvements, and identify guidance document and training needs. Our long-term goal is to use the information to enhance public health protection in Washington through implementation of comprehensive CCC programs by public water systems.

For further information, contact Terri Notestine at terri.notestine@doh.wa.gov or 360-236-3133.



Water System Acquisition and Rehabilitation Program (WSARP)



The 2003 Legislature, at the request of Governor Locke, committed \$4 million to help municipal water systems acquire and rehabilitate public water systems that have water quality problems or have been allowed to deteriorate to a point where public health is an issue. The grant program is intended to help local governments maintain safe and reliable drinking water systems throughout the state.

The WSARP program is jointly administered by the Department of Health (DOH), the Department of Community, Trade and Economic Development, and the Washington State Public Works Board.

2003 WSARP applications



By the November 10, 2003 deadline, DOH received 33 applications for WSARP assistance from 20 jurisdictions requesting nearly \$11 million. The applications propose to acquire/restructure 49 Group A public water systems.

Eligible jurisdictions may receive up to \$1 million in grant funds to partially cover project costs. The Public Works Board will conduct a financial review of the eligible applications after DOH determines system and project eligibility. Priority will go to projects addressing the highest risk to public health.

We anticipate that grant contracts will be offered to the highest priority projects in the spring of 2004.

Future Funding



It is uncertain at this time whether the state will be allocated future funding. The Public Works Board has requested additional funding for future projects.

Staff will know more this spring.

Please visit the board's website to view the program guidelines and other program information, www.pwb.wa.gov.

We are always looking for ways to improve the program and streamline the process to make it easier for clients. If you have concerns or ideas for improvements, we would like to hear from you.

If you have questions on the WSARP program, please contact:

Chris Gagnon
Department of Health
Office of Drinking Water
PO Box 47822
Olympia WA 98504-7822
(360) 236-3095
chris.gagnon@doh.wa.gov

IACC Infrastructure Website

The IACC database is your resource for locating infrastructure funding or technical assistance in Washington State. This site is brought to you by the Infrastructure Assistance Coordinating Council (IACC). The database can be accessed at www.infracfunding.wa.gov

Operators: Change your address or request application packets on-line

A new on-line form makes it easy for water works operators to submit change of address information and to request packets of information and applications from the Operator Certification Program. The application packets you can request include those for:



- Exams
- Retakes of exams
- Upgrade from “In Training” to “Level One” (automatic upgrade)
- Determination on reciprocity (eligibility for a certificate of competency based on certification in another state)

The form is available at http://www.doh.wa.gov/ehp/dw/operatorcertification/op_form.htm

Certified Operator Exam Schedule

Note that you must apply early to take or retake these exams—three months ahead of time for the initial exam, and two months ahead of time if you are retaking one.

Exam Locations and Dates	Exam Locations and Dates	Exam Locations and Dates	Application Deadlines	Retake Application Deadlines
Bellingham, Olympia, Seattle, Spokane, Vancouver, Yakima	Mt. Vernon, Port Angeles, Seattle, Wenatchee	Pasco		
June 1, 2004	June 2, 2004	June 3, 2004	March 2, 2004	April 6, 2004
October 5, 2004	October 6, 2004	October 7, 2004	July 6, 2004	August 3, 2004

Sampling Basics

It is not surprising there may be some confusion about how to collect a drinking water sample for water quality analysis. There are many procedures to follow, depending on what you are sampling for (coliform bacteria, inorganic chemicals, volatile organic chemicals, total trihalomethanes, haloacetic acids, etc.).

There are, however, several common steps that are the same regardless of the type of sample being collected that will simplify the sampling process:

1. Carefully choose the sampling point.
 - For source-based monitoring requirements (nitrate, complete inorganic chemistry, volatile organic compounds) take the sample from a tap located close to the source but after all treatment (if any), and before entry into the distribution system.
 - For distribution-based samples (coliform, lead and copper, total trihalomethanes, asbestos), take the sample from a home or other appropriate location in the distribution system.
2. Remove from the tap any attachment such as a hose, filter, screen, or aerator.
3. Flush the tap for more than 10 minutes (except for lead and copper samples) or until the water temperature becomes stable.
4. Fill out the water sample information form (lab slip) completely, including:
 - Public Water system ID number.
 - Water system name.
 - For source-based monitoring requirements, the appropriate DOH source number (for example, S01) or source numbers for blended samples. For distribution-based samples, leave DOH source number blank.

- Sample purpose (usually “C” for compliance).
 - Sample type (i.e., pre-treatment/raw or post-treatment/finished).
 - Collection date and time.
 - Sample location (specific location, such as pumphouse tap or residence address).
 - System type (Group A or B).
 - County in which the water system is located.
5. Fill the sample bottle following instructions (exactly) provided by the laboratory.
 6. Do not touch the inside of the cap or over-tighten it.
 7. Complete the “chain-of-custody” form.
 8. Deliver (drop off or mail) the sample to the laboratory as soon as possible after collection, within the specified time frame.

For more information, visit the Office of Drinking Water publications web site at http://www.doh.wa.gov/ehp/dw/Our_Main_Pages/public.htm to download or order a variety of new sampling brochures.

Public hearings scheduled on three final proposed rules

The Office of Drinking Water has been working on three major rule revisions during 2003. The notice of proposed rulemaking has been filed for all three, and the final proposed rules are now ready for public hearings early next year.

Operating Permits (Chapter 246-294 WAC)

Purpose: Update criteria for compliance to be consistent with new drinking water regulations that have been adopted since this rule was first enacted (1993).

Public hearing:	January 12, 2004
Final adoption:	February, 2004
Rule effective:	March, 2004

Arsenic Standard – Group A systems (Chapter 246-290 WAC)

Purpose: Adopt a state regulation to be consistent with the federal rule.

Objective: To strengthen protection from long-term exposure to arsenic.

Public hearing:	January 14, 2004
Final adoption:	January 2004
Rule effective:	March 2004

Long-Term 1 enhanced surface water treatment rule – Group A systems (Chapter 246-290 WAC)

Purpose: Adopt a state regulation to be consistent with the federal rule.

Objective: To strengthen microbial controls for small systems using a surface water source (those systems serving fewer than 10,000 people.)

Public hearing:	January 14, 2004
Final adoption:	January 2004
Rule effective:	March 2004

We will be mailing the hearing notices to all Group A public water systems in late December. The proposed language for the rules will be on the Department of Health website, <http://www3.doh.wa.gov/policyreview/> in late December.

Both public hearings will be held at the Department of Health, Point Plaza East, 310 Israel Road SE, Tumwater, Washington 98504.

For more information, contact Theresa Phillips, 360-236-3147.



Third Annual Evergreen Rural Water Drinking Water Taste Test

Evergreen Rural Water of Washington is looking for the best tasting water in the state.

In an effort to bring national attention to the high quality of water provided by small and rural water utilities, the National Rural Water Association sponsors a nationwide taste competition among entries from its 45 member state associations.

For its entry, Evergreen Rural Water of Washington will choose the best of the best to represent Washington State in Washington D.C. at the National Rural Water Association Rally April 18-20, 2004.

The state taste test will be held February 11, 2004 at the Evergreen Rural Water of Washington Annual Conference and Tradeshow in Yakima. Small and rural water utilities are encouraged to enter.

"We hope to have several entries from all across the state," said Gary Rhoades, ERWoW Executive Director. "This is a good way to showcase the pride we have in the work our utilities do."

Former winners of the contest were Columbia Rim Homeowners Association (2002) and the City of Oakville (2003). Columbia Rim Homeowners Association went on to win the national award in 2002.

For information about how to compete in ERWoW's Third Annual Water Taste Test, or to have an entry form, including rules and regulations, sent to you, contact Evergreen Rural Water of Washington at 1-800-272-5981.



New Municipal Water Law affects planning and water rights *Advisory group will make recommendations on water conservation rules*

Over the past several months, the Office of Drinking Water has worked steadily to carry out the provisions of the 2003 Municipal Water Law (HB1338). Key elements of the new law include:

- Greater water right certainty and flexibility for municipal water suppliers.
- New requirements for water utility planning documents.

On November 6, we issued interim direction for utility planning document review and approval. This interim direction is designed to assist water utilities in preparing their plans and help Drinking Water staff ensure that the plans comply with the new law.

With this interim process in place, we have begun to formally engage with interested parties to develop long-term processes. For more information on our planning program please contact Michele Vazquez at 509-456-2774.

The Municipal Water Law also directs the Department of Health to adopt water use efficiency rules by December of 2005 and to convene an advisory group to assist with development of those rules. We have begun the process of bringing that group together. It will be formed as a subcommittee of the Water Supply Advisory Committee and will represent a balance of the different affected interests.

The subcommittee will include water utilities of various sizes, ownership and geographic location, environmental groups, business interests, tribal governments, the Department of Ecology, and others. The objective of the subcommittee's work is to prepare a set of recommendations to the Department of Health by December of 2004.

Subcommittee meetings are expected to begin in February or March 2004. For more information, contact Denise Clifford at 360-236-3098 or Jim Rioux at 360-236-3154.

- New and Revised Publications -



These are the latest publications produced by the Office of Drinking Water:

Potential GWI Sources-Determining Hydraulic Connection Through Water Quality Monitoring (#331-230).

A 16-page guidance document for drinking water systems outlining the

Water Quality Monitoring (WQM) method of analyzing groundwater sources that may be “under the direct influence of surface water” (GWI). This approach to determining “hydraulic connectivity” is designed to identify groundwater sources that need further evaluation of direct surface water influence.

Potential GWI Sources—Microscopic Particulate Analysis (#331-231). A 16 page guidance document for drinking water systems outlining the Microscopic Particulate Analysis (MPA) method of analyzing groundwater sources that may be “under the direct influence of surface water” (GWI). This approach is intended to identify organisms that occur only in surface waters and whose presence in groundwater clearly indicates that at least some surface water has been mixed with it.

Mandatory Language for Drinking Water Public Notification (#331-040). A 22 page revised guidance document that contains the federally-required language for use in notification to customers from public water systems experiencing certain violations of drinking water regulations.

Simple Fixes for Wellhead Openings (#331-232). A one-page illustrated guide to fixing common problems that small drinking water systems encounter in protecting wellheads from contamination.

Getting Drinking Water Information (#331-185). A revised 2-page fact sheet listing Office of Drinking Water contacts for information: Website, publications, newsletter, technical assistance.

Drinking Water State Revolving Fund (#331-233). 2-page fact sheet with general information about the Drinking Water State Revolving Fund (DWSRF) program, loan requirements, and systems that have received loans.

Cross Connection Control for Small Water Systems (331-234). 253-page guidance document on the development and implementation of a cross-connection control (CCC) program for Group A public water systems with less than 1,000 connections. Such programs may often be streamlined to suit the lower health risk of a predominantly residential customer base and reduce operating costs.

Demonstrating that Multiple Wells Draw from a Single Aquifer (331-235). 2-page fact sheet identifying what public water systems must do to allow the state to determine when separate wells are drawing from the same aquifer. This determination can affect the water system’s sampling requirements.

Drinking Water State Revolving Fund Loan Program: Chapter 246-296 WAC (#331-236). 15-page document containing the state regulations that relate to the Drinking Water State Revolving Fund.

Water Works Operator Certification Regulations: WAC 246-292 (#331-108). 16-page revised document containing the state regulations for water works operator certification.

Satellite System Management Agencies: Chapter 246-295 WAC (#331-237). 9-page document containing the state regulations regarding Satellite System Management Agencies (SMAs), which “own or operate more than one public water system on a regional or county-wide basis, without the necessity for a physical connection between such systems.”

Preparing for a Sanitary Survey: Information to Help Small Water Systems (#331-238). 32-page booklet to help small drinking water systems prepare for routine sanitary surveys. Provides basic information on the sanitary survey inspection process, minimum components of a survey, a self-inspection checklist, and common deficiencies surveyors hope *not* to find.

Public notification helps protect public health (#331-239). 2-page fact sheet describing the requirement that water systems notify their customers when they have a situation that poses a risk to public health.

Preparation of a Coliform Monitoring Plan for the Small Non-Community Water System (#331-240). 8-page guidance document with instructions on producing a Coliform Monitoring Plan for single-connection water systems (for example, a store or church) or very simple, small water systems (for example, a store with two single-family homes). Includes instructions, a blank form, and two examples.

Recommendations Regarding Affordability and Sustainability of the State’s Drinking Water Systems (#331-241). 68-page report of the the Washington Water Supply Advisory Committee (WSAC) to the DOH Office of Drinking Water. Contains six recommendations based on a review of previous and present state programs and efforts to address affordability and sustainability concerns.

All our publications are listed on the web at http://www.doh.wa.gov/ehp/dw/Our_Main_Pages/public.htm. If you have questions, call Abigail Hughes at 360-236-3164.

2003 Drinking Water Seminars

In October and November the Office of Drinking Water presented our annual series of Drinking Water Seminars in five locations around the state. They were well attended, reaching over 400 water utility managers and operators, local health staff, and laboratory personnel.

Each seminar began with one of our Regional Managers (Dan Sander, Bill Liechty or Bob James) talking about the evolution of drinking water regulations – similar to a Drinking Water 101 lecture or “why we do what we do.” Included was the history of Washington State regulations from 1913 to present, a review of federal standards, including the Safe Drinking Water Act and recent bioterrorism act of 2002, guidelines for drinking water systems, and resources available.

Jim VanDerslice, senior epidemiologist for the Office of Environmental Health Assessments, presented a very technical subject in a crowd-pleasing way when he talked about setting drinking water quality standards and “how safe is safe enough.” Acting Director Rich Hoey rounded out the morning talking about what’s on the “regulatory horizon” for 2004.

Breakout sessions for large and small systems were presented by Office of Drinking Water staff and included the following topics:

- New Directions in Compliance
- Community Water Fluoridation: Case Studies – Panel Discussion
- Sanitary Surveys of Small Water Systems
- Emergency Response Planning
- Arsenic Standard and Disinfectants/Disinfection By-products
- 2003 Water Resource Legislation
- Operating and Managing a Small Water System

PowerPoint presentations from the seminars are available on the Web at:

http://www.doh.wa.gov/ehp/dw/Our_Main_Pages/presentations.htm

The evaluations indicate that most attendees felt the seminars were worth the time away from work and were a good educational experience. One attendee said the seminar, “Helped me understand my responsibilities as an ‘elected volunteer’ for our water association.” Another said it was a “good opportunity to hear directly from DOH staff about programs, priorities, and upcoming issues.”

We also received lots of comments from attendees on topics for the 2004 Drinking Water Seminar. If you have ideas or suggestions for next year’s event, please contact Donna Lynch in Training and Outreach at 360-236-3167 or email her at donna.lynch@doh.wa.gov.



Training and Education Calendar Jan. - March 2004

<u>Date</u>	<u>Topics</u>	<u>Location</u>	<u>Contact</u>	<u>Phone #</u>	<u>Cost/CEU</u>
Jan 6-8	Cross Connection Control Basics and Exam Review	Auburn	WETRC	1-800-562-0858	\$275/2.1
Jan 6-8	Water Distribution Certification Exam Review	Mt Vernon	WETRC	1-800-562-0858	Call/2.1
Jan 6-8	Water Distribution Manager Exam Review	Moses Lake	ERWOW	1-800-272-5981	Call/2.2
Jan 6-8	Water Trtmnt Plnt Op/Basic Trtmnt Plnt Op Cert Exm Rvw	Olympia	ERWOW	1-800-272-5981	Call/2.1
Jan 6-8	Cross Connection Control Specialist Exam Review	Richland	ERWOW	1-800-272-5981	Call/2.1
Jan 7	Surface Water Treatment*	San Juans	ERWOW	1-800-272-5981	Free/0.5*
Jan 13	Water Distribution Specialist Certification Exam Review*	Mt Vernon	WETRC	1-800-562-0858	Call/0.7*
Jan 13	Surface Water Treatment*	Everett	ERWOW	1-800-272-5981	Free/0.5*
Jan 13-14	Cross Connection Control Specialist Exam Review	Ellensburg	ERWOW	1-800-272-5981	Call/2.1
Jan 13-15	Cross Connection Control Basics and Exam Review	Moses Lake	WETRC	1-800-562-0858	\$275/2.1
Jan 13-15	Water Distribution Certification Exam Review	Auburn	WETRC	1-800-562-0858	Call/2.1
Jan 13-15	Water Distribution Manager Exam Review	Richland	ERWOW	1-800-272-5981	Call/2.2
Jan 13-15	Water Trtmnt Plnt Op/Basic Trtmnt Plnt Op Cert Exm Rvw	Moses Lake	ERWOW	1-800-272-5981	Call/2.1
Jan 14	Automatic Control Valves*	Mt Vernon	ERWOW	1-800-272-5981	Free/0.7*
Jan 15	Water Distribution Specialist Certification Exam Review*	Richland	WETRC	1-800-562-0858	Call/0.7*
Jan 20	Surface Water Treatment*	Lacey	ERWOW	1-800-272-5981	Free/0.5*
Jan 20-22	Water Distribution Manager Exam Review	Vancouver	ERWOW	1-800-272-5981	Call/2.2
Jan 20-22	Cross Connection Control Specialist Exam Review	Olympia	ERWOW	1-800-272-5981	Call/2.1
Jan 21	Surface Water Treatment*	Port Angeles	ERWOW	1-800-272-5981	Free/0.5*
Jan 26-29	Backflow Assembly Tester Certification Course	Auburn	WETRC	1-800-562-0858	\$525/3.0
Jan 27	Surface Water Treatment*	Chelan	ERWOW	1-800-272-5981	Free/0.5*
Jan 27-29	Water Distribution Manager Exam Review	Olympia	ERWOW	1-800-272-5981	Call/2.2
Jan 27-29	Cross Connection Control Specialist Exam Review	Mt Vernon	ERWOW	1-800-272-5981	Call/2.1
Jan 28	Surface Water Treatment*	Newport	ERWOW	1-800-272-5981	Free/0.5*
Jan. 30	Backflow Assembly Tester Certification Exam	Auburn	WETRC	1-800-562-0858	\$180/NA
Feb 2-4	Water and Wastewater Disinfection	Mt Vernon	WETRC	1-800-562-0858	\$275/2.1
Feb 3	Basic Water Works Overview*	Spokane	ERWOW	1-800-272-5981	\$15/0.7*
Feb 4	Basic Water Works Overview*	Yakima	ERWOW	1-800-272-5981	\$15/0.7*
Feb 4-5	Competent Person Cave-in Protection	Everett	WETRC	1-800-562-0858	\$210/1.4
Feb 9	Flagging Certification	Yakima	ERWOW	1-800-272-5981	\$35/NA
Feb 9	Corrosion Control	Yakima	ERWOW	1-800-272-5981	\$Call/0.7
Feb 9-12	Backflow Assembly Tester Certification Course	Auburn	WETRC	1-800-562-0858	\$525/3.0
Feb 10-12	ERWOW's Annual Conference & Tradeshow	Yakima	ERWOW	1-800-272-5981	Call/Call
Feb 11	Water Main Flushing and Dechlorination	Bellevue	KCAWWA	www.kcawwa.org	\$50/0.6
Feb. 13	Backflow Assembly Tester Certification Exam	Auburn	WETRC	1-800-562-0858	\$180/NA
Feb 13	Corrosion Control	Tacoma	ERWOW	1-800-272-5981	Call/0.7

*These courses are designed for small water systems serving 3,300 people or less.

Training and Education Calendar Jan. - March 2004

<u>Date</u>	<u>Topics</u>	<u>Location</u>	<u>Contact</u>	<u>Phone #</u>	<u>Cost/CEU</u>
Feb 18	Seasonal Water System Start-up	Spokane	ERWOW	1-800-272-5981	Free/0.5
Feb 18-19	Competent Person/Cave-in Protection	Richland	ERWOW	1-800-272-5981	Call/Call
Feb 24	Basic Water Works Overview*	Mt Vernon	ERWOW	1-800-272-5981	\$15/0.7*
Feb 24	Seasonal Water System Start-up	Chehalis	ERWOW	1-800-272-5981	Free/0.5
Feb 24-26	Pump Operation and Maintenance	Everett	WETRC	1-800-562-0858	\$275/2.1
Feb 25	Basic Water Works Overview*	Tacoma	ERWOW	1-800-272-5981	\$15/0.7*
Feb 26	Seasonal Water System Start-up	Mt Vernon	ERWOW	1-800-272-5981	Free/0.5
Feb 27	Asbestos Cement Pipe Work Practice Procedures	Auburn	WETRC	1-800-562-0858	\$145/0.7
Mar 1-4	Backflow Assembly Tester Certification Course	Auburn	WETRC	1-800-562-0858	\$525/3.0
Mar 2	Confined Space Entry	Olympia	ERWOW	1-800-272-5981	Call/Call
Mar 3	Basic Water Works Overview*	Shelton	ERWOW	1-800-272-5981	\$15/0.7*
Mar 4	Basic Water Works Overview*	Kelso	ERWOW	1-800-272-5981	\$15/0.7*
March 5	Backflow Assembly Tester Certification Exam	Auburn	WETRC	1-800-562-0858	\$180/NA
Mar 9	Basic Water Works Overview*	Port Angeles	ERWOW	1-800-272-5981	\$15/0.7*
Mar 10	Chlorination Basics*	Olympia	ERWOW	1-800-272-5981	\$15/0.7*
Mar 11	Chlorination Basics*	Battle Ground	ERWOW	1-800-272-5981	\$15/0.7*
Mar 22-24	National Rural Development Conference	Portland, OR	RCAC	(916) 447-9832	Call/Call
Mar 22-25	26 th Annual Water/Wastewater Operations Workshop	Ocean Shores	WETRC	1-800-562-0858	Call/1.8
Mar 23	Chlorination Basics*	Chelan	ERWOW	1-800-272-5981	\$15/0.7*
Mar 23	Cross Connection Control & Backflow Basics*	Mt Vernon	ERWOW	1-800-272-5981	\$15/0.7*
Mar 24	Chlorination Basics*	Moses Lake	ERWOW	1-800-272-5981	\$15/0.7*
Mar 24	Cross Connection Control & Backflow Basics*	Tacoma	ERWOW	1-800-272-5981	\$15/0.7*
Mar 25	Basic Water Works Overview*	Walla Walla	ERWOW	1-800-272-5981	\$15/0.7*
Mar 25	Asbestos Cement Pipe Handling & Procedures	Richland	ERWOW	1-800-272-5981	Call/Call
Mar 30	Sanitary Surveys*	Port Angeles	ERWOW	1-800-272-5981	\$15/0.7*
Mar 31	Sanitary Surveys*	Shelton	ERWOW	1-800-272-5981	\$15/0.7*

**These courses are designed for small water systems serving 3,300 people or less.*

Additional Training Links:

AWWA King County Subsection Web Site – <http://www.kcawwa.org>
 ERWOW Web Site - <http://www.ERWOW.org>
 WETRC Web Site - <http://www.wetrc.org>
 AWWA Pacific Northwest Section - <http://www.pnws-awwa.org/>
 EPA electronic workshops Web site—<http://www.epa.gov/safewater/dwa/electronic.html>

For the complete Training Calendar visit the Drinking Water Homepage and click on Training - www.doh.wa.gov/ehp/dw

NOTE: Links to external resources are provided as a public service, and do not imply endorsement by the Washington State Department of Health.

Free TNC Training Coming

We are pleased to announce a new series of free training courses designed especially for operators of Group A Transient Non-Community (TNC) Water Systems. Evergreen Rural Water of Washington (ERWoW) has been contracted to provide the training for the Office of Drinking Water.

The TNC training will pull from existing courses already taught by ERWoW that are appropriate for TNC water systems.

The courses have not yet been scheduled, but will be offered in 2004-05. Watch for announcements arriving in your mail or in future issues of *Water Tap* for dates of upcoming courses. You can also go online for the current training schedules:

ERWoW — <http://www.erwow.org/>

Drinking Water — http://www.doh.wa.gov/ehp/dw/Our_Main_Pages/training.htm

If you have questions about this or other training, please contact ERWoW at 1-800-272-5981.

In This Issue

The following people contributed to the production of this issue of *the Water Tap*: Stephen Baker, Peggy Barton (WETRC), Cheryl Bergener, Sara Brallier, Dennis Campbell, Derrick Dennis, Nancy Feagin, Chris Gagnon, Rich Hoey, Abigail Hughes, Tracey Hunter (ERWoW), Steve Kelso (Editor), Bill Liechty, Donna Lynch, Melissa Maxfield, Ethan Moseng, Terri Notestine, Derek Pell, Sam Perry, Theresa Phillips, Jim Rioux, Rich Sarver, Judy Sides, Rich Siffert, Paula Smith, Trace Warner.

The Department of Health, Office of Drinking Water, publishes *the Water Tap* to provide information to water system owners, water works operators, and others interested in drinking water. Comments and questions are welcome.

Past issues are available by writing to the editor, the Water Tap, Office of Drinking Water, PO Box 47828, Olympia, WA 98504-7828, or email your request to steve.kelso@doh.wa.gov. Past issues are also available on the web at <http://www.doh.wa.gov/ehp/dw/>

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